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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,547	09/26/2001	Joachim Wiechers	HPBC CASE 83	2289

7590 06/26/2003

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EXAMINER
HANNAHER, CONSTANTINE

ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/937,547	WIECHERS ET AL.	
	Examiner	Art Unit	
	Constantine Hannaher	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed September 26, 2001 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

2. The information disclosure statement filed September 26, 2001 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

3. As set forth in MPEP § 609:

> 37 CFR 1.98(b) requires that each item of information in an IDS be identified properly. U.S. patents must be identified by the inventor, patent number, and issue date. U.S. patent application publications must be identified by the applicant, patent application publication number, and publication date. U.S. applications must be identified by the inventor, the eight digit application number (the two digit series code and the six digit serial number), and the filing date. If a U.S. application being listed in an IDS has been issued as a patent, the applicant should list the patent in the IDS instead of the application. Each foreign patent or published foreign patent application must be identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application. Each publication must be identified by publisher, author (if any), title, relevant pages of the publication, date and place of publication. The date of publication supplied must include at least the month and year of publication, except that the year of publication (without the month) will be accepted if the applicant points out in the information disclosure statement that the year of publication is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the particular month of publication is not in issue. The place of publication refers to the name of the journal, magazine, or other publication in which the information being submitted was published.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Note the use of "The invention relates to" which can be implied. The presence of the phrase means that the abstract is not "as concise as the disclosure permits" and thus was inconsistent with PCT Rule 8.1(b).

5. Section 608.01 of the MPEP states in part:

> In order to minimize the necessity in the future for converting dimensions... to the metric system of measurements when using printed patents... all patent applicants should use the metric (S.I.) units followed by the equivalent English units when describing their inventions....

The Assistant Secretary and Commissioner of Patents and Trademark strongly reiterated and emphasized strong encouragement for patent applicants to use the metric system in patent applications in a message appearing at 1135 O.G. 55 dated February 18, 1992. At some future time, the USPTO will consider making it a requirement.

Note the use of the micron and the bar. The Examiner is unable to require the use of SI units. Their use in a PCT application is required by PCT Rule 10.1(a).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "said aspheric concave mirror" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. An aspheric concave mirror is established by claim 11 instead.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 10-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki *et al.* (US005689114A) in view of Burch *et al.* (US003916195A).

With respect to independent claim 10, Miyazaki *et al.* discloses a device **32** (Fig. **2**) for determining the concentration of a substance in a mixture by measuring the

concentration-dependent molecule-specific extinction of radiation (column 1, lines 15-21) comprising an absorption chamber **38** filled with the sample to be measured, a radiation source **34**, two receivers **10a, 10b** associated with the measurement of the concentration of a component of the mixture (column 3, lines 21-31), a device for splitting the radiation from the radiation source **34** into two radiation paths L_1, L_2 to the receivers **10a, 10b** traversing the same number and pairwise identical optical elements **46, 48** and the substance in the absorption chamber **38** with the two paths L_1, L_2 having a different optical length in the absorption chamber, a device **40, 42** for measuring the extinction in the two radiation paths L_1, L_2, and a device **44** for determining the measured value(s) by comparison (column 3, lines 21-31). Although the device for splitting the radiation from the radiation source in the device of Miyazaki *et al.* is not two concave mirrors, Burch *et al.* shows that two concave mirrors **32, 33** are suitable for splitting the radiation from a radiation source **10** in a device which also comprises an absorption chamber **34** and two receivers **46, 72**. As Miyazaki *et al.* shows a variety of devices for splitting the radiation from the source (see Figs. **2** and **4**) and the concave mirrors **32, 33** of the device of Burch *et al.* offer focusing onto the receivers without the imposition of the lenses of Miyazaki *et al.* (reducing the complexity of the device by more simply manufactured mirrors), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device **32** of Miyazaki *et al.* to split the radiation from source **34** using two concave mirrors as suggested by Burch *et al.*

With respect to dependent claims 11 and 12, Burch *et al.* leaves the form of the two concave mirrors **32, 33** a choice within the ordinary skill in the art. The specific choice of an aspheric form would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the desired performance with the variety (spheroidal, ellipsoidal, paraboloidal, hyperboloidal) available.

With respect to dependent claim 14, Miyazaki *et al.* shows (Figs. **3** and **5**) that a mirror **62, 162** may be formed integrally with the housing of which the absorption chamber **138, 168** is formed by an interior of. In view of the advantages of reducing the size of the device, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the specifically concave mirrors suggested by Burch *et al.* integrally with the housing of the absorption chamber.

With respect to dependent claims 15 and 16, the construction of a device as suggested by Miyazaki *et al.* and Burch *et al.* is a choice within the ordinary skill in the art in view of such concerns as ease of manufacture, ruggedness, and the like. Whether the housing suggested by Miyazaki *et al.* is one part or a great many parts, the mirror **62, 162** is "integral" within the meaning of the law with at least one such housing part so it would have been obvious to one of ordinary skill in the art at the time the invention was made to specify that the inclusion of the two specifically concave mirrors suggested by Burch *et al.* was integral to a housing part. To balance the quality control during manufacture and assembly, furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the electrical parts of source and receiver on a part of the housing separate from the part with the mirrors.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki *et al.* (US005689114A) and Burch *et al.* (US003916195A) as applied to claim 10 above, and further in view of Hagen *et al.* (DE3437397A1).

With respect to dependent claim 13, a radiation source of the recited type has long been known, as shown for example by Hagen *et al.*, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device suggested by Miyazaki *et al.* and Burch *et al.* to include such a source in view of such advantages as small size and speedy operation.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki *et al.* (US005689114A) and Burch *et al.* (US003916195A) as applied to claim 16 above, and further in view of Peters *et al.* (US005550375A).

With respect to dependent claim 17, Miyazaki *et al.* and Burch *et al.* omit any description of the material of which the suggested mirrors are made. The use of a metal as a housing part integral with a concave mirror must be considered to be made obvious to one of ordinary skill in the art at the time the invention was made in view of the suggestions of Peters *et al.* at column 2, lines 36-49 in a device comprising an absorption chamber **1**, source **7**, two receivers **8, 11** and an integral concave mirror (grating) **9** because of the suitable reflectivity in the infrared range.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki *et al.* (US005689114A) and Burch *et al.* (US003916195A) as applied to claim 16 above, and further in view of Hirayama *et al.* (DE19808128A1).

With respect to dependent claim 18, Miyazaki *et al.* and Burch *et al.* omit any description of the material of which the suggested mirrors are made. The use of aluminum as a housing part integral with a concave mirror must be considered to be made obvious to one of ordinary skill in the art at the time the invention was made in view of the suggestions of Hirayama *et al.* with element **33** in a device comprising an absorption chamber **70**, source **30**, receiver **60** and an integral concave mirror because of the suitable reflectivity in the infrared range.

Response to Submission(s)

14. The amendments filed September 26, 2001 have been entered.

C nclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (703) 308-4850. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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June 20, 2003

Constantine Hannaher
Primary Examiner